

**Notice of Allowability**

Application No.

09/863,175

Examiner

Joseph P. Hirl

Applicant(s)

KEHDER ET AL.

Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 20, 2005.
2. ☒ The allowed claim(s) is/are 1-5,7-19,21-34,36-41,43-46 and 48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

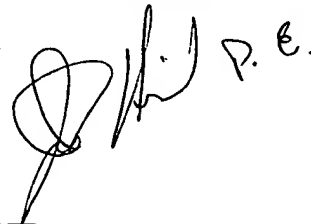
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 11/29/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



***Examiner's Amendment/Reasons for Allowance***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

***In the Claims***

2. The following changes are to be made:

Claim 1, line 2, delete "model" and insert --model for business applications--.

Claim 1, insert after step (b): --wherein each interaction segment consists of the following genes – an include/exclude gene, a coefficient gene, a first variable gene, an operator gene and a second variable gene;--

Claim 20, cancel.

Claim 21, line 1: delete "claim 20" and insert --claim 1--.

Claim 28, line 2, delete "model" and insert --model for business applications--.

Claim 28, line 10, delete "model;" and insert --model, said chromosome creating step comprising forming a chromosome having a plurality of observed variable segments each formed by a plurality of genes, a plurality of interaction segments each formed by a plurality of genes, and an interceptor gene positioned after said plurality of interaction segments;

wherein each interaction segment consists of the following genes – an include/exclude gene, a coefficient gene, a first variable gene, an operator gene and a second variable gene;--

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Claim 34, line 1, delete "model" and insert –model for business applications--.

Claim 34, line 5, delete "model;" and insert –model, said chromosome creating step comprising forming a chromosome having a plurality of observed variable segments each formed by a plurality of genes, a plurality of interaction segments each formed by a plurality of genes, and an interceptor gene positioned after said plurality of interaction segments;

wherein each interaction segment consists of the following genes – an include/exclude gene, a coefficient gene, a first variable gene, an operator gene and a second variable gene;--

Claim 41, line 1, delete "model" and insert –model for business applications--.

Claim 41, line 5, delete "segements." and insert –segments;

wherein each interaction segment consists of the following genes – an include/exclude gene, a coefficient gene, a first variable gene, an operator gene and a second variable gene.—

Claim 47, cancel.

Claim 48, line 1: delete "claim 47" and insert –claim 41--.

3. Authorization for this examiner's amendment was given in a telephone interview with Barry I. Kelmachter on November 29, 2005.

***Reasons for Allowance***

4. Claims 1-5, 7-19, 21-34, 36-41, 43-46, and 48 are allowed.
5. The following is an examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fails to teach the claims invention of implementing the concept of a genetic algorithm to predict the value of a single dependent variable based on the value of at least one independent variable using sets of chromosomes wherein the chromosome has a plurality of genes, a plurality of interaction segments each formed by a plurality of genes, and an interceptor gene positioned after said plurality of interaction segments wherein each interaction segment consists of the following genes – and include/exclude gene., a coefficient gene, a first variable gene, an operator gene and a second variable gene.

The closest prior art (Michalewicz, GENOCOP: a genetic Algorithm for Numerical Optimization Problems with Linear Constraints) new methods for solving numerical optimization problems with linear constraints based on genetic algorithms. Michalewicz teaches chromosome selection but does not teach gene determination made up of a plurality of interaction segments each formed by a plurality of genes, and an interceptor gene positioned after said plurality of interaction segments wherein each interaction segment consists of the following genes – and include/exclude gene., a coefficient gene, a first variable gene, an operator gene and a second variable gene.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Correspondence Information***

7. Any inquiry concerning this information or related to the subject disclosure should be directed to the Primary Examiner, Joseph P. Hirl, whose telephone number is (571) 272-3685. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David R. Vincent can be reached at (571) 272-3080.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

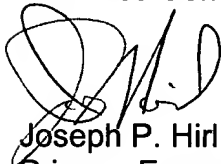
or faxed to:

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(571) 273-8300 (for formal communications intended for entry.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll free).

 P. E.  
Joseph P. Hirl  
Primary Examiner  
November 29, 2005